

WHAT IS CLAIMED IS:

1. A management system for managing an industrial machine using a data communication network, comprising:

a management apparatus for selectively giving an operation right of the industrial machine to one of a first operation apparatus arranged in a factory where the industrial machine is installed and a second operation apparatus arranged at a remote site from the factory where the industrial machine is installed; and

a control apparatus for operating the industrial machine in accordance with an instruction from the operation apparatus to which the operation right has been given by said management apparatus and providing information representing an operation condition of the industrial machine to the operation apparatus.

2. The system according to claim 1, wherein the second operation apparatus and said control apparatus are connected through the data communication network.

3. The system according to claim 1, wherein said management apparatus selectively gives the operation right of the industrial machine to one of the first and second operation apparatuses in accordance with an instruction from a manager of the industrial machine.

4. The system according to claim 3, wherein the system further comprises a manager setting section for setting the manager of the industrial machine, and

said management apparatus selectively gives the operation right of the industrial machine to one of the first and second operation apparatuses in accordance with an instruction from the manager set by said  
5 manager setting section.

5. The system according to claim 1, further comprising a limiting section for limiting contents of operation of the industrial machine by the first operation apparatus through said control apparatus when  
10 the manager of the industrial machine is a manager of the second operation apparatus.

6. The system according to claim 1, further comprising a limiting section for limiting contents of operation of the industrial machine by the second  
15 operation apparatus through said control apparatus when the manager of the industrial machine is a manager of the first operation apparatus.

7. The system according to claim 1, further comprising a security system for making information  
20 related to the operation of the industrial machine by the first operation apparatus secret to the second operation apparatus and making information related to the operation of the industrial machine by the second operation apparatus secret to the first operation  
25 apparatus.

8. The system according to claim 7, wherein said security system makes some or all pieces of information,

which are secret to the second operation apparatus,  
public to the second operation apparatus in accordance  
with an instruction from the first operation apparatus  
and makes some or all pieces of information, which are  
5 secret to the first operation apparatus, public to the  
first operation apparatus in accordance with an  
instruction from the second operation apparatus.

9. The system according to claim 8, wherein when the  
operation right of the industrial machine is given to  
10 the first operation apparatus, said security system  
makes the information representing the operation  
condition of the industrial machine public to the  
second operation apparatus in accordance with an  
instruction from the first operation apparatus, and  
15 when the operation right of the industrial machine is  
given to the second operation apparatus, said security  
system makes the information representing the operation  
condition of the industrial machine public to the first  
operation apparatus in accordance with an instruction  
20 from the second operation apparatus.

10. The system according to claim 1, wherein the  
second operation apparatus is arranged in a business  
office of a person in charge of manufacturing, sales,  
or maintenance of the industrial machine or a person in  
25 charge of services about the industrial machine.

11. The system according to claim 1, wherein the  
industrial machine comprises a semiconductor

manufacturing apparatus.

12. The system according to claim 11, wherein said semiconductor manufacturing apparatus comprises any one of an exposure apparatus, CVD apparatus, etching  
5 apparatus, CMP apparatus, resist coating apparatus, development apparatus, ashing apparatus, and inspection apparatus.

13. A management method of managing an industrial machine using a data communication network, comprising:  
10 the management step of selectively giving an operation right of the industrial machine to one of a first operation apparatus arranged in a factory where the industrial machine is installed and a second operation apparatus arranged at a remote site from the  
15 factory where the industrial machine is installed; and  
the control step of sending an instruction from the operation apparatus to which the operation right has been given in the management step to a control apparatus of the industrial machine to cause the  
20 control apparatus to control the industrial machine and sending information representing an operation condition of the industrial machine from the control apparatus to the operation apparatus.

14. The method according to claim 13, wherein the  
25 second operation apparatus and control apparatus are connected through the data communication network.

15. The method according to claim 13, wherein in the

management step, the operation right of the industrial machine is selectively given to one of the first and second operation apparatuses in accordance with an instruction from a manager of the industrial machine.

- 5 16. The method according to claim 15, wherein  
the method further comprises the setting step of setting the manager of the industrial machine, and

- in the management step, the operation right of the industrial machine is selectively given to one of  
10 the first and second operation apparatuses in accordance with an instruction from the manager set in the setting step.

17. The method according to claim 13, further comprising the limiting step of limiting contents of  
15 operation of the industrial machine by the first operation apparatus through the control apparatus when the manager of the industrial machine is a manager of the second operation apparatus.

18. The method according to claim 13, further  
20 comprising the limiting step of limiting contents of operation of the industrial machine by the second operation apparatus through the control apparatus when the manager of the industrial machine is a manager of the first operation apparatus.

- 25 19. The method according to claim 13, further comprising the security step of making information related to the operation of the industrial machine by

the first operation apparatus secret to the second operation apparatus and making information related to the operation of the industrial machine by the second operation apparatus secret to the first operation apparatus.

20. The method according to claim 19, wherein in the security step, some or all pieces of information, which are secret to the second operation apparatus, are made public to the second operation apparatus in accordance with an instruction from the first operation apparatus, and some or all pieces of information, which are secret to the first operation apparatus, are made public to the first operation apparatus in accordance with an instruction from the second operation apparatus.

21. The method according to claim 20, wherein in the security step, when the operation right of the industrial machine is given to the first operation apparatus, the information representing the operation condition of the industrial machine is made public to the second operation apparatus in accordance with an instruction from the first operation apparatus, and when the operation right of the industrial machine is given to the second operation apparatus, the information representing the operation condition of the industrial machine is made public to the first operation apparatus in accordance with an instruction from the second operation apparatus.

22. The method according to claim 13, wherein the second operation apparatus is arranged in a business office of a person in charge of manufacturing, sales, or maintenance of the industrial machine or a person in charge of services about the industrial machine.

23. The method according to claim 13, wherein the industrial machine comprises a semiconductor manufacturing apparatus.

24. The method according to claim 23, wherein the semiconductor manufacturing apparatus comprises any one of an exposure apparatus, CVD apparatus, etching apparatus, CMP apparatus, resist coating apparatus, development apparatus, ashing apparatus, and inspection apparatus.